Amendments To The Specification:

Please replace the paragraph starting on line 6 of page 2 with the following replacement paragraph:

To begin, if the piston 1c of the compression space 1a and the piston 1d of the expansion space 1d are moved from left to right on the basis of the drawing with constantly keeping the distance between them, an operating gas within the compression space 1a is compressed. At this time, a temperature of the operating gas rises up to $T_H + dT_H$, wherein T_H is a temperature of the hot heat exchanger 5a, and dT_H is a predetermined increased temperature. (S10⊟ ≃ S20)

Please replace the paragraph starting on line 12 of page 2 with the following replacement paragraph:

If the piston 1c is moved from left to right continuously with keeping a constant pressure, a heat of the operating gas within the compressing space 1a having comparatively a higher temperature than that of the wall surface of the hot heat exchanger 5a is emitted to the outside via the hot heat exchanger 5a. (S20 ⊟ ≃S30)

Please replace the paragraph starting on line 16 of page 2 with the following replacement paragraph:

Simultaneously, the heat of the operating gas is transferred to an inner matrix of the regenerator 3 via the hot heat exchanger 5a. Then, the heat from the matrix of the regenerator 3 is transferred to the cold heat exchanger 5b, thereby the cold heat exchanger 5b has a higher temperature Tc than the prior temperature. Then, the temperature Tc of the cold heat exchanger 5b changes the temperature of the expansion space 1b. The temperature of the operating gas within the expansion space 1b into which the heat of the comparatively higher temperature is input becomes immediately higher,

and the operating gas is expanded. At this time, since the piston 1d is moved according to thermal expansion of the operating gas within the expansion space 1b, the temperature within the expansion space 1b becomes Tc-dTc, wherein Tc is a temperature of the cold heat exchanger 5b, and dTc is a predetermined decreased ~~decresed~~ temperature. (S30 ⊟ ~S40)

Please replace the paragraph starting on line 3 of page 3 with the following replacement paragraph:

Meanwhile, if the piston 1c of the compression space 1a and the piston 1d of the expansion space 1d are moved from right to left on the basis of the drawing with constantly keeping the distance between them, an operating gas is compressed, and thereby the piston 1d is moved from right to left on the basis of the drawing, and simultaneously the operating gas receives heat from the outside, since the temperature of the operating gas within the expansion space 1b becomes relatively lower than that of the cold heat exchanger 5b. (S40⊟ ~S10)

Please replace the paragraph starting on line 18 of page 11 with the following replacement paragraph:

For example, if a flame having a temperature of about ~~1000 ⊟~~ 1000°C generated from the burner 11 of the driver 10 is applied to the metal knit 12a, the flame is homogeneously transferred to the driving gas within the first hot heat exchanger 12 by way of radiation. Then, the driving gas is vibrated by the sound wave having the pressure of about 7,600 mmHg and the frequency of about 500 Hz, and then the temperature of the driving gas is raised through the adiabatic compression process due to the above vibration.

Please replace the section entitled "Abstract of the Disclosure" with the following amended section:

Abstract of the Disclosure

A ~~This invention relates to a~~ heat driven acoustic ~~orifice~~ type pulse tube cryocooler ~~for installing~~ has metal knit installed within a driving section cooling a driving gas of an application device using a principle of high temperature superconductivity, and then homogeneously ~~heating~~ heats the driving gas by way of premixed combustion~~. To do this, the inventive cryocooler comprises a driver generating a flame radiating heat having a predetermined temperature, homogeneously heating a driving gas, and adiabatically compressing the driving gas~~ so that the driving gas generates an acoustic having a predetermined frequency. ~~; a regenerator receiving the driving gas output from the driver, and cooling the driving gas; a pulse tube receiving the cold driving gas output from the generator, adiabatically compressing the driving gas, and generating the driving gas having a high temperature; a cold reservoir receiving the high temperature driving gas output from the pulse tube, and adiabatically expanding the driving gas; a first hot heat exchanger installed between the generator and the pulse tube, and exchanging heat with the outside; a cold heat exchanger installed between the pulse tube and the cold reservoir, and exchanging heat with the outside; and an~~ The orifice installed within ~~the cold~~ a reservoir~~, the orifice controlling an~~ controls the amount of the driving gas running between the cold reservoir and the pulse tube to constantly maintain a pressure of the cold reservoir. Therefore, ~~Wherein~~ the driving gas repeats the process of the compression and expansion centering around the pulse tube, thereby cooling the application device.